

CLAIMS

1. A communication system having a downlink indicator channel (DL₁) for the transmission of an indicator signal (302) indicating that a data packet is (202) scheduled to be transmitted on a downlink data channel (DL₂) from a primary station (100) to a secondary station (110), the secondary station having receiving means (114) for receiving the indicator signal and the data packet, and acknowledgement means (114) for transmitting a signal (206) to the primary station to indicate the status of the received data packet, wherein the secondary station comprises means (114) for transmitting on an uplink channel (UL) a status signal (204) to indicate receipt of the indicator signal before transmission of a positive or negative acknowledgement (206) to indicate the status of the received data packet.
2. A system as claimed in claim 1, characterised in that the status signal is the same signal as that used for a negative acknowledgement.
3. A primary station (100) for use in a communication system having a downlink indicator channel (DL₁) for the transmission of an indicator signal (302) indicating that a data packet (202) is scheduled to be transmitted on a downlink data channel (DL₂) from the primary station to a secondary station (110), wherein means (104) are provided for receiving on an uplink channel (UL) a status signal (204) from the secondary station to indicate receipt of the indicator signal before reception of a positive or negative acknowledgement (206) to indicate the status of the data packet received by the secondary station.
4. A primary station as claimed in claim 3, characterised in that the status signal is the same signal as that used for a negative acknowledgement.
5. A secondary station for use in a communication system having a downlink indicator channel (DL₁) for the transmission of an indicator signal

(302) indicating that a data packet (202) is scheduled to be transmitted on a downlink data channel (DL₂) from a primary station (100) to the secondary station (110), wherein receiving means (114) are provided for receiving the indicator signal and the data packet, acknowledgement means (114) are provided for transmitting on an uplink channel (UL) a signal (206) to the primary station to indicate the status of the received data packet, and means (114) are provided for transmitting a status signal (204) to indicate receipt of the indicator signal before transmission of a positive or negative acknowledgement to indicate the status of the received data packet.

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6. A secondary station as claimed in claim 5, characterised in that the status signal is the same signal as that used for a negative acknowledgement.

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7. A secondary station as claimed in claim 5 or 6, characterised in that the status signal is transmitted at the same power as a positive acknowledgement.

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8. A secondary station as claimed in any one of claims 5 to 7, characterised in that means (112, 118) are provided for resetting a timer on receipt of the indicator signal and for modifying a characteristic of uplink transmissions until the timer expires.

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9. A secondary station as claimed in claim 8, characterised in that means (114) are provided for transmitting a negative acknowledgement for each time at which a data packet could have been transmitted if no transmission of a data packet is detected, and in that such negative acknowledgements are only transmitted until the timer expires.

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10. A secondary station as claimed in claim 8 or 9, characterised in that the timer has a duration of one sub-frame.

11. A secondary station as claimed in claim 9, characterised in that means (114) are provided for transmitting a positive or negative acknowledgement of a received data packet N times, where N is predetermined, and for transmitting subsequent negative acknowledgements
5 until the timer expires.

12. A secondary station as claimed in claim 11, characterised in that the timer has a duration of N sub-frames.

10 13. A secondary station as claimed in any one of claims 5 to 12, characterised in that means (114) are provided for transmitting a plurality of status signals before transmission of the acknowledgement.

14. A method of operating a communication system having a
15 downlink indicator channel (DL₁) for the transmission of an indicator signal (302) indicating that a data packet (202) is scheduled to be transmitted on a downlink data channel (DL₂) from a primary station (100) to a secondary station (110), the method comprising the secondary station receiving the indicator signal and the data packet, and transmitting (806) on an uplink
20 channel (UL) a status signal (204) to indicate receipt of the indicator signal before transmission (810, 816) of a positive or negative acknowledgement to indicate the status of the received data packet.